

**ABSTRACT**

An apparatus for obtaining tomosynthesis data of an object comprises a source emitting radiation centered around an axis of symmetry; a radiation detector comprising a stack of line detectors, each being directed towards the source at a respective angle; and a device for moving the source and the radiation detector relative the object linearly in a direction orthogonal to the symmetry axis, while each of the line detectors is adapted to record line images of radiation as transmitted through the object in the respective angle. A device is provided for rotating the radiation detector around a rotation axis orthogonal to the symmetry axis, and the device for moving is further arranged to repeat the essential linear movement of the source and the radiation detector relative the object, while each of the line detectors is adapted to record a further plurality of line images of radiation as transmitted through the object.